

WHAT IS CLAIMED IS:

1. A wireless communication system comprising:

a base station which transmits signals;

a mobile unit which receives the signals from the base station, the mobile unit containing a first speech coder and a second speech coder, the mobile unit encoding voice data in a signal to transmit using either the first speech coder or the second speech coder;

a signal strength detector in the mobile unit which determines the quality of the signals received by the mobile unit; and

a coder selector which directs the mobile unit to switch from the first speech coder to the second speech coder when the quality of the signals exceeds predetermined levels.

2. The wireless communication system of Claim 1, wherein the coder selector switches from said second speech coder to said first speech coder when the quality of the signals is less than the predetermined levels.

3. The wireless communication system of Claim 1, wherein the coder selector may be bypassed.

4. The wireless communication system of Claim 1, wherein the first speech coder is bit-exact and the second speech coder is not bit-exact.

5. The wireless communication system of Claim 4, wherein the first speech coder and the second speech coder are compatible.

6. The wireless communication system of Claim 1, wherein the signal strength detector measures the estimated frame-by-frame bit error rate.

7. The wireless communication system of Claim 1, wherein the signal strength detector is based upon absolute power.

8. A method of conserving power in a wireless communication system comprising the acts of:

determining the quality of at least one signal received from a base station; and

selecting a secondary speech coder when the signal quality exceeds a predetermined value.

9. The method of Claim 8 further comprising the act of selecting a primary speech coder when the signal quality is less than the predetermined value.

10. The method of Claim 8, wherein the act of selecting a secondary speech coder may be selectively activated.

11. The method of Claim 8, wherein the secondary speech coder is not bit-exact.

12. The method of Claim 8, wherein the secondary speech coder is one of a family of speech coders.

13. The method of Claim 8, wherein the secondary speech coder saves power.

14. The method of Claim 8, wherein the secondary speech coder reduces processor loading.

15. The method of Claim 8, wherein the quality of signals received is determined by the RX Quality.

16. The method of Claim 8, wherein the quality of signals received is determined by the estimated frame-by-frame bit error rate.

17. The method of Claim 8, wherein the quality of signals received is determined by a parity check.

18. A wireless communication system comprising,
a processor usage indicator which determines the loading on a processor in a mobile unit; and
a speech coder selector which causes the mobile unit to use a secondary speech coder when the loading on the processor exceeds a set value.

19. The wireless communication system of Claim 18, wherein the speech coder selector may be selectively activated.

20. The method of Claim 18, wherein the secondary speech coder saves power.

21. The method of Claim 18, wherein the secondary speech coder reduces processor loading.

22. The wireless communication system of Claim 18, wherein the speech coder selector causes the mobile unit to use a primary speech coder when the loading on the processor is less than a set value.

23. The wireless communication system of Claim 22, wherein the primary speech coder and the secondary speech coder are members of a family of speech coders.

24. The method of Claim 23, wherein the secondary speech coder is not bit-exact.

25. The method of Claim 23, wherein the primary speech coder is bit-exact.

26. The method of Claim 23, wherein the secondary speech coder is one of a family of speech coders.

27. A wireless communication system comprising;

a signal strength indicator which determines the quality of a signal received by a mobile unit; and

a speech coder selector which causes a mobile unit to use a secondary speech coder when the signal strength exceeds a set value.

28. The wireless communication system of Claim 27, wherein the speech coder selector causes the mobile unit to use a primary speech coder when the loading on the processor is less than a set value.

29. The wireless communication system of Claim 27, wherein the speech coder selector may switch between the primary speech coder and the secondary speech coder each frame.

30. A wireless communication system comprising;

means for determining the quality of a signal received; and

means for switching from a first speech coder to a second speech coder when the signal quality exceeds a predetermined value.

31. The wireless communication system of Claim 30, wherein the means for switching switches from the second speech coder to the first speech coder when the signal quality is below the predetermined value.

5 32. The wireless communication system of Claim 30, wherein the second speech coder consumes less power than the first speech coder.

33. The wireless communication system of Claim 30, wherein the switching means is software controlled.

34. The wireless communication system of Claim 30, wherein the predetermined value may be dynamically adjusted.

10 *Sub C9* 35. A wireless communication system comprising;
means for determining the loading on a processor; and
means for switching from a first speech coder to a second speech coder
when the processor loading exceeds a set value.

15 36. The wireless communication system of Claim 35, wherein the means for switching switches from the second speech coder to the first speech coder when the processor loading is less than a set value.

37. The wireless communication system of Claim 35, wherein the switching means may be selectively disabled.

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38. The wireless communication system of Claim 35, wherein the first speech coder and the second speech coder are members of a family of speech coders.